The space weather threat... and how we protect ourselves

April 24, 2016

The space weather threat... and how we protect ourselves

by Geoffrey Reeves

Many people think of space as a silent, empty void and the Sun as only a distant source of light and heat. Not true. The Sun and the Earth are connected in more complex, intimate, and sometimes dangerous ways.

The Sun continually ejects high-energy electrons, protons, and other nuclei that bombard the Earth, producing space-weather effects such as the beautiful northern lights but also others that can destroy satellites and disrupt our lives here on Earth.

The particles flowing from the Sun to the Earth make up the “solar wind,” which sometimes blows as a gentle breeze and sometimes rages like a hurricane. The Earth’s magnetic field captures and traps some of the solar wind in a region encircling our planet called the Van Allen radiation belts—a region where almost all of our satellites operate. During bad space-weather conditions those satellites are at risk.

This article first appeared in Huffington Post.

Managed by Triad National Security, LLC for the U.S Department of Energy's NNSA